

Atmospheric Composition and Chemistry

Title	Fit Hours	PS/PE/PM	Related Satellite/Sensor	2021	2022	2023	2024	2025	2026	2027	2028
▼ 1) Atmospheric Composition and Chemistry											
• 1.1) TEMPO LAUNCH		Lefer	TEMPO								
• 1.2) AEROMMA	200	Lefer	GOER-R, TEMPO, SNPP								
• 1.3) GOTHAMM-AQ	80	Lefer EPA	TEMPO								
• 1.4) STAQs	100	Lefer	TEMPO, Sentinel 5P								
• 1.5) FireSense Demo		Lefer									
• 1.6) PACE LAUNCH		Lorenzoni	PACE								
• 1.7) Asia-AQ (Phase1)	200	Lefer / Jucks	GEMS, TROPOMI								
• 1.8) FireSense Demo -2		Lefer									
• 1.9) ARCSIX	300	Maring/Markus	ICESat-2								
• 1.10) FireSense UAS Demo		Lefer									
• 1.11) MAIA LAUNCH		Lefer	MAIA								
• 1.12) Asia-AQ (Phase2)	200	Lefer / Jucks	GEMS, TROPOMI								
• 1.13) GEOCarb LAUNCH		Jucks	GEOCarb								
• 1.14) GEOCarb cal/val (AJAX?)	??	Jucks	GEOCarb								
• 1.15) AOS Suborbital prep		Maring	AOS								
• 1.16) FIREX-AQ (2)	150	Lefer									

Carbon Cycle and Ecosystems

Terrestrial Ecology, Biodiversity, Carbon Monitoring

Title	Fit Hours	PS/PE/PM	Related Satellite/Sensor	2021	2022	2023	2024	2025	2026	2027
▼ 2) Carbon Cycle & Ecosystems Science										
• 2.1) SHIFT	20	Turner	SBG							
• 2.2) LVIS-GEDI -22		GSFC	GEDI							
• 2.3) UAVSAR-TE-23	20	Bawden/Margolis	NISAR							
• 2.4) BLUEFLIX (CMS) - 23	150	Hibbard								
• 2.5) WDTS - 23 spring	30	Turner	SBG							
• 2.6) AVIRIS-23	20	Turner/Margolis	SBG							
• 2.7) LVIS-GEDI -23		Margolis	GEDI							
• 2.8) Western Diversity - 23 fall	30	Turner	SBG							
• 2.9) BioSCape	250	Turner	SBG, BioMASS							
• 2.10) NISAR LAUNCH			NISAR							
• 2.11) UAVSAR-TE-24	60	Bawden/Margolis	NISAR							
• 2.12) BLUEFLIX (CMS) - 24	150	Hibbard								
• 2.13) SHIFT - repeat	20	Turner	SBG							
• 2.14) AVIRIS-24	20	Turner/Margolis	SBG							
• 2.15) STV demo - forest topography		Margolis/Phillips	STV							
• 2.16) Western Diversity - 24	30	Turner	SBG							
• 2.17) PACE LAUNCH			PACE							
• 2.18) PACE PAX		Lorenzoni	PACE							
• 2.19) SBG Pathfinder	30	Turner	SBG							
• 2.20) Arctic COLORS	100	Lorenzoni								
• 2.21) GLIMR cal/val		Lorenzoni	GLIMR							

The timeline chart shows the progression of various satellite missions from 2022 to 2027. A red vertical line marks the timeline. The legend indicates the following mission types and their colors:

- G-III (Blue)
- Other B-200 (Orange)
- ER-2 (Green)
- NASA GV (Red)
- Other B-200 (Purple)
- TBD (Yellow)
- G-III (Brown)

Specific missions listed in the chart include:

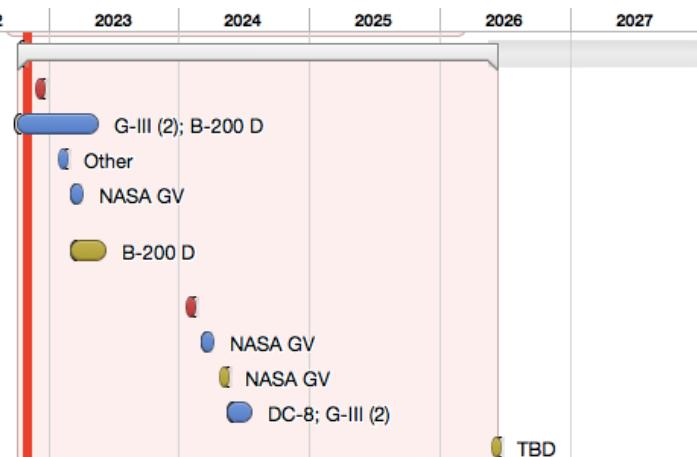
- 2022: Other B-200 (blue), G-III (blue), G-III (orange), Other B-200 (orange), ER-2 (green), Other B-200 (purple), NASA GV (red), ER-2 (green), NASA GV; G-III (blue).
- 2023: G-III (blue), Other B-200 (orange), Other B-200 (orange), Other B-200 (purple), G-III (brown), ER-2 (green), Other B-200 (purple).
- 2024: G-III (blue), Other B-200 (orange), Other B-200 (orange), Other B-200 (purple), G-III (brown), ER-2 (green), Other B-200 (purple).
- 2025: ER-2 (green), Other B-200 (purple), TBD (yellow), TBD (yellow), TBD (yellow).
- 2026: TBD (yellow), TBD (yellow), TBD (yellow).
- 2027: TBD (yellow).

Water and Energy Cycle

Terrestrial Hydrology

Climate Change and Variability Cryosphere and Physical Oceanography

Title	Fit Hours	PS/PE/PM	Related Satellite/Sensor	2021	2022	2023	2024	2025	2026	2027
▼ 3) Climate Variability and Change										
• 3.1) SWOT Launch			SWOT							
• 3.2) S-MODE - 2022-23		Shiffer	SWOT							
• 3.3) Vanilla UAS Snow mission repeat			ICESat-2							
• 3.4) SWOT post launch ocean cal/val (SCRIPPS MASS)	120	Shiffer	SWOT							
• 3.5) SWOT post-launch hydrology cal/val (AirSWOT)	120	Shiffer	SWOT							
• 3.6) NISAR LAUNCH		Bawden	NISAR							
• 3.7) SWOT cal/val	120	Shiffer	SWOT							
• 3.8) ICESAT-2 cal/val		Markus	ICESat-2							
• 3.9) ARCSIX	300	Maring/Markus	ICESat-2							
• 3.10) EXPLORER class ocean concept		Shiffer								



Earth Surface and Interior

Title	Fit Hours	PS/PE/PM	Related Satellite/Sensor	2021	2022	2023	2024	2025	2026	2027
▼ 5) Earth Surface & Interior										
• 5.1) QUAKES	36	Phillips	STV							
• 5.2) Landslide mission	18	Phillips	NISAR							
• 5.3) USGS (GEMx/EMRII)	100	Phillips	Landsat / SBG							
• 5.4) STV technology development		Phillips/ Bawden/ ESTO	STV incubator							
• 5.5) AirMOSS mission	18	Bawden								
• 5.6) QUAKES-23	36	Phillips	STV							
• 5.7) NISAR LAUNCH			NISAR							
• 5.8) NISAR cal/val -24	100	Bawden	NISAR							
• 5.9) UAV vulcanology / glaciology demo - mission in development	72	Phillips	SBG							
• 5.10) USGS (GEMx) - 24	100	Phillips	Landsat / SBG							
• 5.11) QUAKES-24	36	Phillips	STV							
• 5.12) STV Tech Demo (Quakes ++?)		Phillips	STV							
• 5.13) NISAR cal/val -25	12	Bawden	NISAR							
• 5.14) USGS (GEMx) -25	100	Phillips	Landsat / SBG							
• 5.15) European vulcanology mission		Phillips	SBG							
• 5.16) NISAR cal/val -26	12	Bawden	NISAR							
• 5.17) USGS (GEMx) -26	100	Phillips	Landsat/SBG							
• 5.18) NISAR cal/val -27	12	Bawden	NISAR							

The Gantt chart displays the timeline for several projects from 2022 to 2027. Key tasks include:

- 2022:** NASA GV (G-III), ER-2, TBD.
- 2023:** G-III, NASA GV, TBD.
- 2024:** G-III, ER-2, NASA GV, TBD.
- 2025:** G-III, ER-2, NASA GV, TBD.
- 2026:** G-III, ER-2, NASA GV, TBD.
- 2027:** G-III, ER-2.

Weather and Atmospheric Physics

Title	Fit Hours	PS/PE/PM	Related Satellite/Sensor	2021	2022	2023	2024	2025	2026	2027
6) Weather and Atmospheric Dynamics										
• 6.1) ALOFT	55	McCarty	GOES-r							
• 6.2) GOES-R cal/val	100	McCarty	GOES-R							
• 6.3) TROPICS underflight		McCarty	TROPICS							
• 6.4) IIP / AITT instrument demos		ESTO / McCarty	PBL incubator							
• 6.5) Planetary Boundary Layer technology and characterization experiments		ESTO	PBL incubator							
• 6.6) Next Weather field campaign		McCarty	AOS							
• 6.7) AOS Suborbital prep		Maring	AOS prelaunch							

The Gantt chart visualizes the timeline of flight activities. A vertical red line marks the timeline from 2022 to 2027. The chart area is shaded pink. Activities are represented by colored bars:

- ER-2 flights: Blue bars (multiple entries)
- DC-8; Any Twin Otter flights: Yellow bars (multiple entries)
- TBD entries: Gold bars (multiple entries)